GSM/GPS SYSTEM

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Abstract-This research paper consist of design of hardware and software of the GPS based on GSM network in order to value the instrumented system done to see the effect. The offered GPS/GSM based system design to be partitioned into 2 parts which are the mobile unit and the control station. GSM introduced to describe the protocols for second generation (2G) digital cellular networks which nowadays used by many of the mobile phones. GPS refers to the global positioning system which provides the location and time information. This research paper also contains the information about GSM architecture and sub systems which has three layer. With the help of GPS/GSM architecture, central command station can communicate with the vehicles. We work-room and get at the details of the M right not to be public and checking to make certain approved designs, and offer a new checking to make certain approved design with less signing business trade and better telephone put up time, that can be used in mobile networks.

I. INTRODUCTION

GSM stands for the 'Global system for mobile communication'. Earlier it was named as group special mobile developed by European Telecommunication standards Institute (ETSI). GSM introduced for to describe the protocols for the second generation (2G) digital cellular networks which is used by mobile phones.

One system which is more important these days that is GSM/GPS based system which integrates both GSM and GPS technologies. GPS/GSM based system is important these days because of many of the applications of GPS and GSM.

GPS refers to the 'Global Positioning System' which provides the location time information in any weather condition anywhere or near the earth. With the help of GPS/GSM system, central command station can communicate vehicles. Nowadays, many countries had started to fitting the GPS in the cars, ambulance and police vehicles etc. That's why this technology is brought to the day to day life of man.

GSM – a digital mobile telephony system, which is globally accessed by more than 212 countries and territories. Global system for mobile communication is completely optimized for full duplex voice telephony. Initially developed for the replacement of first generation (1G) technology, now GSM is available with lots of salient features with the constant up gradation of third generation (3G) technology.

And now with the alliance of microcontroller, GSM MODEM could be further tailor-made for some of very innovative applications including GSM based DC motor controller, GSM based home security system, GSM based robot control, GSM based voting machine control, GSM based stepper motor controller etc.

II. DESCRIPTION

GSM operates on the 900MHz, 1800MHz and 1900MHz. GSM uses Digital communication system or DCS 1800 and is the worlds main 2G system. When the FCC issued 1900MHz to the PC in the united states it was based on GSM. DCS 1900 is considered as the GSM standard for the north America and is called North American GSM.

GSM is now a days worldwide standard which is used in all over the world. GSM uses Time Division Multiple Access or TDMA technology as their air interface standard. TDMA has limited capabilities. GSM is strictly controlled by a Memorandum of understanding(MOU).

Nowadays many people losing their lives due to the number of accident occurring. According to the World Health Organization, an estimated 1.2 million people lose their lives every year due to car accidents. India's road accident records 16 % of the world's road accident deaths, whereas India has only 1 % of the world's road vehicles. It is due to the increase in the number of vehicles without a subsequent increase in the road facilities required for it. In most of the accident cases, the victims lose their lives because of the unavailability of medical facilities at the right time.

This project is mainly used to track the position of the Vehicle by the owner or can also be used in the public transportation system by the people to know the location of the buses or trains. In case of any accident, the system sends automated messages to the pre-programmed numbers. We can send messages to any number of mobiles.

In this part out it is put forward to design a fixed in system which is used for going after by signs and positioning of any vehicle by using complete positioning System (Ups) and complete system for readily moved news (GSM) system is very useful for automobile crime against property situations (danger sign ready, engine starting, making near, not general) for young person drivers being watched and looked at by father and mother. (rate of motion limit going over limits, going away from a special area) as well as for man-like and person specially loved going after by signs. It also used for safe having transport in industries. A good number of going after by signs systems had so far been undergone growth with a wide range of going after by signs buildings. But the operation price of most of these systems is higher which keeps from taking place from stretched wide use. On the other hand, the rate of automobile crime against property, property theft, Child taking a person off by force in many countries are increasing at a higher rate. The end of this make observations is to get changed to other form the price of the going after by signs system using the latest technologies and making it ready (to be used) to the common persons in general.

This part out is mainly used to unbroken bands over wheels for moving over rough earth the position of the vehicle by the owner or can also be used in the public having transport system by the people to be clear about the placing of the uses or trains. In Case of any smash, the system sends made automatic notes to the pre-programmed numbers. We can send notes to any number of not fixed. The owner of the vehicle, Police to clear the business trade, hospital automobile to but for the people can be detailed by this apparatus. This uses a Ups (complete positioning System) to have knowledge of the exact position of the vehicle with a having no error of a few feet. M is used to let into one is house ms from the user and answer the position of the vehicle through a ms . For example, a great comfort hotel in Singapore has been within one is knowledge to put in vehicle going after by signs system in their limousines to make certain they can well take in their Is when they get stretched the hotel. Vehicle going after by signs systems have also been used in food things taken round to and automobile rental companies.

GSM Architecture and Subsystem

GSM architecture is an open architecture according to which open systems interconnect or OSI model for layers 1, 2 and 3.

- Layer 1: Physical layer
- Layer 2: Data link layer
- Layer 3: Network layer

GSM uses voice coders/decoders or vocoders. Vocoders are the firmware and chips sets that digitized the human voice. Voice that is sampled channelized is housed in vocoders. Vocoders packetize the sample of the human speech and transmit it through the handset to the base station.

III. CONCLUSION

The communication development and the increase of living standard of people are directly related to the more use of cellular mobile. Cellular mobile radio-the high end sophisticated technology that enables everyone to communicate anywhere with anybody. The mobile telephony industry rapidly growing and that has become backbone for business success and efficiency and a part of modern lifestyles all over the world. The features and benefits expected in the GSM systems are superior speech quality, low terminal, operational and service costs, a high level security, providing international roaming support of low power hand portable terminals and variety of new services and network facilities. In near forth coming days, the third generation mobile telephony becomes available whole over the world, which will give the facility of videoconference in mobile telephone.

IV. FUTURE WORK

This technology could be further modified and more upgraded as per individual need and interest. We have discussed some basic ideas of this technology. And depending on innovative applications user can upgrade as per requirement.

V. ACKNOWLEDGMENT

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